LightWavin'

The Magazine For LightWave™ Animators

JANUARY 1997

1st Issue

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Minimum System Requirements

PC	DEC Alpha
Pentium	FX!32
16mb RAM	16mb RAM
2X CD-Rom	2X CD-Rom
Win95/NT	WinNT

Created By
David Warner

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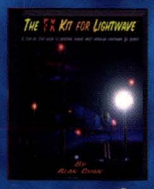
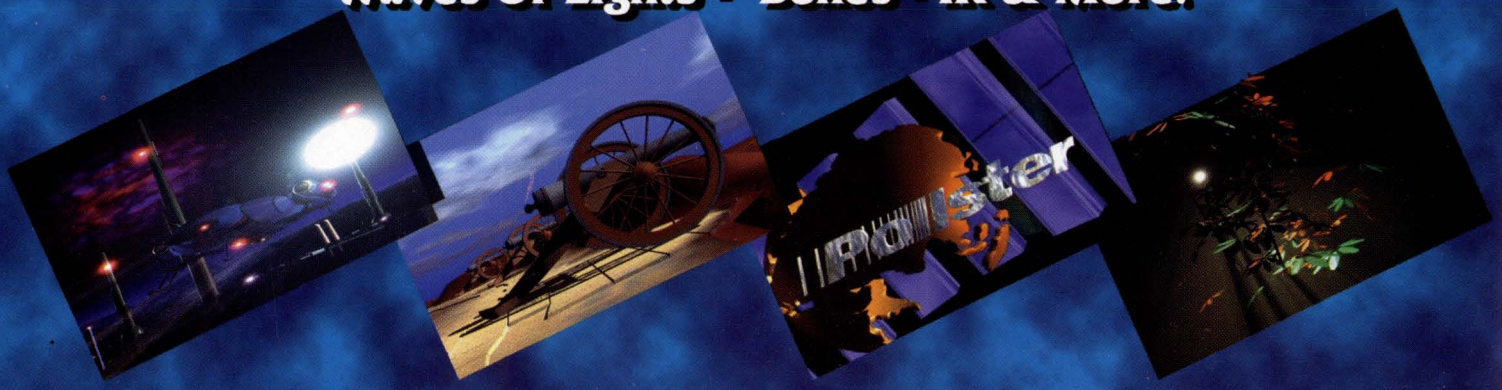
for only $69.95



FX KIT FOR LIGHTWAVE

Join the thousands of people already enjoying the world's most popular LightWave book, The FX KIT FOR LIGHTWAVE. With over 300 pages and 700 illustrations, the FX KIT will take you on a journey through 11 chapters which include: A Primer to 3D - Getting Around LightWave - Introduction To Modeler - Intermediate Modeling -Surface Concepts - Imitating Nature - space Effects - Waves Of Lights - Bones - IK & More!



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PHOTOREAL FX

Alan Chan, author of the FX Kit for Lightwave and Power FX 5.0 books now brings you a third and powerful new book, PHOTOREAL FX. If achieving Photo-Realism in Lightwave is your goal, PHOTOREAL FX will show you the ins and outs of making your images look as realistic as possible. With almost 300 pages of tips, tricks & techniques, PHOTOREAL FX will get you up to speed on producing stunning frames in the shortest amount of time.

TOPICS THAT ARE COVERED

The Real World - Elements Of Photorealism - Art Design

Telling The Story With The Camera - How We See Things

Using The Real World As A Reference - Power Modeling

Techniques - Criteria For A Good Object - Detailing

Surface Textures - Creating Complimentary Image Maps

Real Vs. CG - Real World Lighting - Three Point Lighting

Things Any Animator Should Know - Creating Explosions

Shadow Options - The Camera Eye - Creating Smoke

Trails & More!

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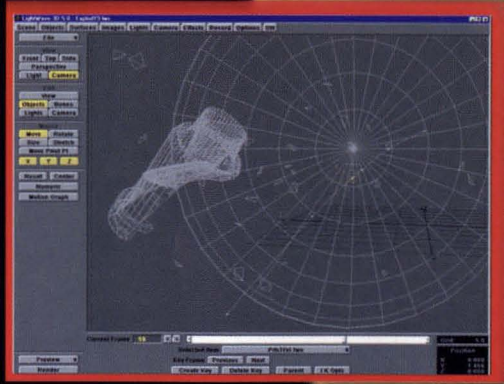
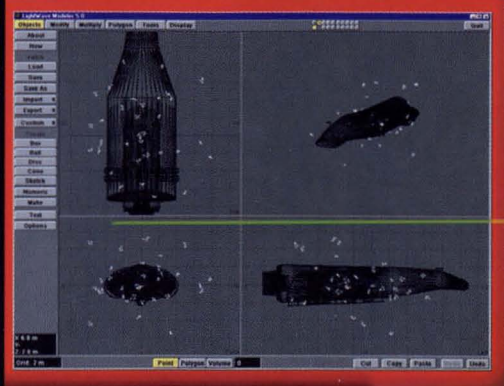




AVAILABLE FROM LIGHTSPEED

PROJECT MODELER

Ace Miles will make it easy for you while he takes you through the steps required to model your own CG 'Movie Set' and props. What could be better for this than building a child's room full of toys?

This first tape will get you started with many of modeler's basic tools as you create objects along with Ace. This includes a toy robot with all the trimmings. All of these techniques and tools will be needed for tape 2.

Only $39.95 ea.

This second tape takes a more in depth look at Modeler! Follow along with tutorials on designing a child's room, his bed and the toys that go under it. You'll also use the extremely powerful metaform and MetaNURBS tools to create a toy phone, cowboy hat, laser gun and more!

Tape One

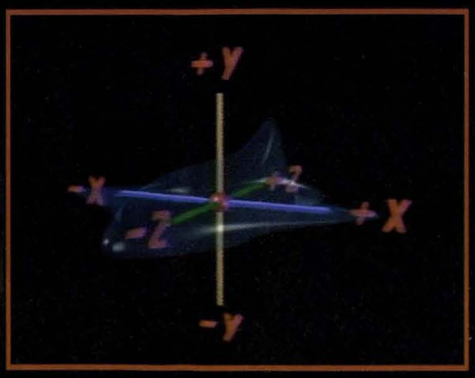
- Working In Layers, Part By Part
- Designing Text For Flying Logos & Other Projects
- Beveling, Extruding, Slicing, Stenciling & Insets
- Stretching, Sizing & Tapering For Detail
- Cutting, Copying & Pasting For Quicker Results
- Display Modes Including Open GL Configurations
- Using Primitives To Create Complex Objects
- Keyboard Shortcuts & More!

Tape Two

- Lathe, Bend & Array
- Single Or Multiple Rail Extrude & Rail Clone
- Complex Polygons With Sketch Tool & Point Manipulation
- Basic Spline Patching
- Metaform & Gaining Control By Slicing & Subdividing
- Exploring Multiple Ways of Modeling The Same Object
- MetaNURBS Made Easy
- Using Other Tools With MetaNURBS To Increase Their Power

ACE MILES

A senior animator at Atari-Games/Williams Entertainment and Lightwave instructor at the Academy of Art College in San Francisco



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LIGHTWAVIN EDITORIAL

Wow! It's almost a new year and boy have there been a lot of changes in 1996. You may be asking yourself, "What's this, another LightWave magazine?". If this is what you thought when you first received this issue, you should continue reading. As you may or may not already be aware of, the two main sources for LightWave related information in magazine format, Video Toaster User and LightWave Pro have both been terminated. This may sound like a line from an Arnold Schwartzenegger film, but it is true. By the time you read this, the last issue of Video Toaster User should be shipping, and the last issue of LightWave Pro has already shipped. With no more VTU's or LWPro's, where does this leave the LightWave user who wishes to keep up on what's new in the LightWave arena? Read on.

Hello and Welcome to the 1st issue of LightWavin' magazine. What is LightWavin' and how does it all fit in with what is going on? LightWavin' is a magazine that will satiate the increasing need for information from the continually growing Lightwave market. It is our goal to bring you a magazine that answers your questions, brings you news from the Lightwave front and hopefully becomes one of your main sources for LightWave related information. You can look forward to LightWavin' becoming bigger and better with each issue we release. We announced to LightWave users on the Internet that LightWavin' would be shipping soon, and we received a lot of positive feedback on what you as the user would like to see in future issues. You can expect to see many of these requested columns in the next issue!

If you feel Lightwavin' is offering a valuable service, please support us by taking a moment to subscribe and get all that we have to offer. By subscribing, not only do you get the LightWavin' magazine,. but you'll also receive the Lightwavin' CD-ROM which will include many of the files and projects discussed in each issue, along with some really cool demo products and other neat stuff from Lightwave 3rd party developers.

This month's CD-ROM includes:

Newtek's new AVI saver for Lightwave
Animation's created with Particle Storm
Winning Images from the LW Mailing List Contest on the Internet
Trial Version of BML for Modeler.
Free Plugins for BML
Tutorial Images and AVI's.
Plus more!

If you received a *complimentary* issue of Lightwavin', then you didn't receive the CD-ROM. You can get this CD-ROM by starting your subscription today. If you would like to subscribe to the magazine without the CD-ROM, you can do so at a reduced rate.

Lightwavin' is currently scheduled as a bi-monthly magazine (6 issues per year). As we grow, we will move to a monthly schedule.

We encourage you to write or e-mail us with your comments, suggestions and what you would like to see in future issues of LightWavin'. We can be reached via email at lightwavin@qnet.com or by writing to:

Lightwavin' Magazine
2763 West Avenue L Suite 172
Lancaster, CA. 93536

That's it for now. Enjoy and we hope to have you as part of the Lightwavin' family as we grow in both size and quality.

Manuel Coats
Publishing Director

Contents

News 6

News and press releases from the LightWave front.

Inexpensive Trees 10

Model Low Polygon Trees that won't break the bank when it comes to rendering.

Polygon Reductions 16

Part one in a series on modeling low polygon objects.

Interview: Alan Chan 20

Alan Chan of Digital Domain and author of the FX series LightWave books gives us his comments..

VTU Expo Review 21

Summary of what took place at VTU in Los Angeles, CA.

Publishing Director: Manuel Coats
Editor: David Warner
Advertising Manager: Mike Sharon
Contributing Writers: Ace Miles, Jason Booth, Dave Thomas

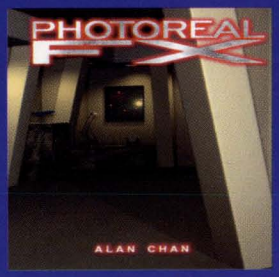
This months cover is by the team at Front Line. It is a frame from an animation movie trailer which just so happened to win the Best Of Contest category in the 1996 Lightspeed Animation Contest. Lightwavin' is published 6 times annually by LightWavin' Multi-media, 2763 West Avenu L Suite 172, Lancaster, CA. 93536, USA. A one year subscription (6 issues) with CD-ROM in the U.S. is $48 (U.S.); Canada/Mexico $60 (U.S.); Overseas $84 (U.S.). A one year subscription (6 issues) without CD-ROM in the U.S. is $24 (U.S.); Canada/Mexico $30 (U.S.); Overseas $42 (U.S.). To subscribe, call 805-726-3546 or write to the address above. If you are interested in writing for LightWavin' Magazine or submitting Images, contact David Warner via e-mail at dwarner@albany.net.

FROM THE FRONT

Things are moving quickly on the Lightwave front! With each issue, *FROM THE FRONT* will try to cover it all bringing you the very latest in Lightwave news and information.

PHOTOREAL FX

Alan Chan, author of the very popular *FX KIT FOR LIGHTWAVE* and *POWER FX 5.0 ADDENDUM* books has come up with yet another new Lightwave book titled, *PhotoReal FX*. This third book in the FX series teaches users how to achieve photo-realism in Lightwave 3D. Where does Alan find the time and energy to pop these out on such a regular basis? We don't know, but we hear he's gone through a dozen or so coffee makers. The book weighs in at almost 300 pages and can be yours for $44.95 by calling Lightspeed (see page 3 for order information).

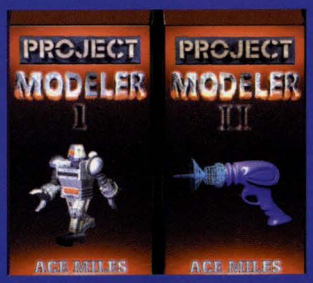


MGT

NewTek Showed a new facial animation plug-in at Siggraph. Titled, The Morph Gimzo Thing (MGT), it is a vertex displacement tool that allows you to lend morph objects to get an unlimited number of new expressions which can be used as keyframes and even saved as new morphs. MGT allows you to take up to 64 groups of 64 morph object sequences for, say, eyes closing, mouth opening, and eyebrows raising, and blend them into complex facial expressions by adjusting sliders for each group. There has been talk about the name, Morph GIMZO Thing. Rumor has it that the original name of Morph GIZMO thing was misspelled and the programmers liked it so much that they decided to stick with it. We'll have to see what the final name is when released.. MGT is expected to ship by the end of the year, from NewTek for under $500.

PROJECT: MODELER

Two new training videos for Lightwave are now available. Ace Miles has put together the *Project Modeler* videos which will teach users how to master the tools Modeler provides. Together, you and Ace will master modeler and even create a robot character. For only $39.95 each, these tapes represent a tremendous value in the market of training videos. They are very well done and informative (see page 4 for order information).



TUTORVISION 3-D/CD

David Warner, moderator of the LightWave mailing list on the Internet has announced his new product, TutorVision 3-D/CD. TV3D/CD is an interactive CD-ROM for Lightwave buffs. With just a few clicks of your mouse, you'll have access to a ton of Lightwave content including video tutorials you watch on your monitor, text tutorials which can be read or listened to, LightWave objects which rotate 360 degrees for a full perspective, animations, plug-ins, interviews and more. Labeled Volume 1, we're told that a Volume 2 will be created based on how successful this one is. For just $69.95 & a risk free guarantee, you can't go wrong. (see page 3 for order information).

PLUG-IN WOES

You might have noticed that the availability of Lightwave plug-ins for certain platforms are either not available or are not released until much after the release on another platform. Many have wondered why a lot of plug-in developers have developed or are currently developing plug-ins for the Intel and Dec Alpha platform, while ignoring the Amiga, MIPS & SGI platforms. We questioned a few of the companies creating plug-ins or programs that enhance Lightwave and here's what we found.

77% of Lightwave plug-ins are purchased by Intel users.
20% comes from DEC Alpha users.
3% comes from Amiga users.
Less than 1% comes from SGI & MIPS users combined.

PLUG-IN WOES

These figures are not representations of the number of Lightwave users using that particular platform, but instead a representation of the percentage of plug-in buyers from different platforms.

We were told by some of the developers that they will concentrate their efforts on the Intel and DEC Alpha platforms, with revisions of the software that are a few releases old for the other platforms. Other developers have even mentioned that they may drop support for either the Amiga, SGI or MIPS platform, or even all three altogether due to lagging sales which do not even recoup the R&D put in to developing for that platform.

Regardless of what happens, Lightwave is becoming more popular in television, movies, games, Internet development and other areas. As the expectations of people get higher in each particular field, animations will need to become more and more complicated. Plug-ins will come in to make difficult or even impossible applications in Lightwave attainable. We'll be sure to cover these plug-ins in future issues.

FROM THE FRONT

FAILED DONGLES

Have you ever been in the middle of a big project and all of a sudden your Dongle fails? Even if this has never happened, we all know that not being able to use Lightwave while you wait for yours to be repaired could have devastating effects on your project deadlines. Below are some new policies NewTek has incorporated to make things less painful should your hardware key (Dongle) fail:

1) Standard Repair Policy:

-In Warranty: Call NewTek Tech Support for an RMA, ship the Hardware Key to NewTek with RMA number on the label. NewTek will repair or replace the hardware key, and will ship within 24 hours of receiving the hardware key, by the same priority which the customer used to ship to NewTek.

-Out of Warranty: Same as above, with $50 repair fee.

2) Cross-ship Policy:

-In Warranty: Call NewTek Tech Support for an RMA. Provide a credit card which has $1500 available as security for the cross-ship. A replacement hardware key bearing the same serial number as the failed hardware key will be shipped within 24 hours, by two-day air. NewTek must receive the failed hardware key within 10 working days of the date the RMA is issued, or the charge of $1500 will be levied on the card.

-Expedited: Call for RMA as above, user pays $25 expedite In Warranty fee. Orders placed before 1:00 PM Central Time are shipped the day of the order, and by next-day-air; orders placed after 1:00 PM Central Time are shipped the following day, and ship next-day air priority. All other procedures are the same as preceding paragraph.

-Out of Warranty: Call for RMA as above, $75 repair fee paid by user, all other procedures are as in expedited In-Warranty paragraph.

Warranty on Hardware keys is one year from the date of purchase of the LightWave package. Replacement or repair of a key during the warranty period does not extend the warranty. Out of Warranty hardware keys which are repaired or replaced carry a 90-day repair warranty.

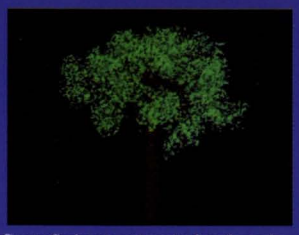
THE CAMELOT COLLECTION

Replica Technology has announced its newest CD-ROM, *The Camelot Collection.* This CD-ROM contains over 250 real-world scaled Lightwave 3D objects. The collection contains objects such as a complete Medieval English castle with all furnishings, royal apartments, gatehouses, functional drawbridge, portcullis, great hall, kitchen, blacksmith shop, stables, elaborate chapel, animated torches, medieval weapons, towers, spiral stairs, battlements, etc. The CD-ROM also includes over 100 custom 24 bit textures maps. This is your complete source to a 12th century virtual environment for Lightwave 3D. (see page 9 for order information)

BML FOR LIGHTWAVE

Virtual Visions, creators of *BML for Modeler* has announced that the *BML for Layout* should be available in January 1997. Currently being beta tested, the five new BML Scripting Plug-Ins for Layout will consist of Image Filter, Procedural Texture (shader), Displacement Map, Item Animation (motion) and Object replacement. Registered owners of BML for Modeler will be eligible to purchase any or all of the BML for Layout Plug-Ins at discounted prices. For now, you can enjoy the BML for Modeler package which is a complete plug-in development system for Lightwave 3D Modeler. You can create your own plug-ins or run one of the many that come with the BML Modeler software or choose from the many that are being created by other BML owners and are now floating around on the Internet. BML for Modeler is currently shipping for the Intel and DEC Alpha versions of LightWave 3D (see back cover for order info).

Create Hair!



Create Scripts to automate lengthy tasks such as creating the leaves on this tree.

NEW AVI SAVER

Many of you may not have been able to use or have used a buggy version of the AVI saver for LightWave. Not anymore. NewTek released a new version of the AVI saver by Ernie Wright which works great. You can find this AVI saver on this months Lightwavin' CD-ROM. Here are some of the features & bug fixes:

1. No longer creates damaged AVIs when overwriting existing ones, or when saving more than once during a LightWave session.
2. Saving is aborted and users get an error message when the filename doesn't have a ".avi" extension.
3. Limited region is handled correctly. The previous version of the saver stored the whole frame, because that's the size LightWave tells it to save. This version queries LightWave to find out whether the limited region is active and saves only the region selected.
4. The frame rate of the AVI depends on scene settings and is set to the number of frames per second divided by the frame step. When you test-render every third frame of a 30 fps scene, the AVI will play back at 30 / 3 = 10 fps.
5. Keyframe and data rate settings are available in the AVI options dialog. These allow you to create smaller files at the expense of image quality.

Caveats:

This plug-in won't help you make QuickTime movies
As always, the NewTek-AVI saver is for Windows 95 and NT. It won't work in Windows 3.1 running LightWave 4.0.

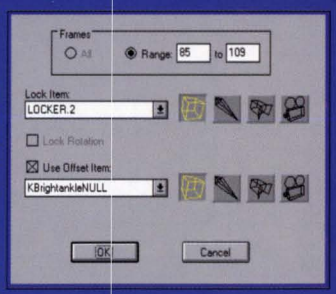
FROM THE FRONT

NEW PLUG-INS FROM DYNAMIC REALITIES

Dynamic Realities announces three new products:

Particle Storm 1.0 is now shipping for Intel, DEC Alpha and MIPS platforms. The focus of Particle Storm is to aid in the creating of particle effects in Lightwave 3D. Special effects such as smoke, fire, explosions, water and more can be made easily in minutes using the real-time preview window. Gravity, force fields, chaotic wind with variable swirling, drag, flocking and swarming are all supported. MSRP for Intel is $395 and $495 for DEC Alpha and MIPS.

Shaderman 1.0 is now shipping for the Intel, DEC Alpha, MIPS and Amiga platforms. Shaderman is a package of 25 high quality procedural shaders such as enhanced marbles, wood, metal and flame. Shaderman plugs into Lightwave's shader interface (version 5.0 and later only). Included in the list of shaders include Veined Marble, Blue Marble, Rubber, Saturn, Starfield, Glass, Wood, Plank, Flame, Clouds, Metallic, Plastic, Matte, Glow, Granite, Luna and more. Each shader has a set of parameters that can be adjusted to give the user maximum control. MSRP for Intel and Amiga is $195 and $295 for DEC Alpha and MIPS.



Lock & Key 1.6 is now shipping for the Intel, DEC Alpha, Amiga & MIPS platforms. Lock & Key is a dynamic parenting utility which allows any LightWave item to be parented to any other item on a per frame basis. This proves useful for many animations, but is especially useful for character animations as it eliminates foot slide during character walks. MSRP for Intel and Amiga platforms is $249 and $349 for DEC Alpha and MIPS platforms. (see page 23 for order information) We're told that a new version of IMPACT! will be released 1st quarter of next year. We'll let you know more in the next issue.

3-BUTTON MOUSE & LW

As you probably know, in Layout you can hold down the SHIFT key and select an object by left clicking near its pivot point on the screen. This can save a lot of time if you have many objects on the screen at once. However, if you are one of the lucky ones that has a 3 button mouse, you can click on an item in layout with the middle button, without having to use the SHIFT key

NEW CD-ROMS FROM DEDICATED DIGITAL IMAGERY

Dedicated Digital Imagery has released two new CD-ROMS for LightWave. The first is the *Digital Museum CD.* This CD-ROM contains many very high resolution 3D objects! Created from history, this collection features costumed humans, endangered species, dinosaurs and historic places, plus contemporary objects and a digital backlot.. 200 Incredible objects in Lightwave, 3D Studio and DFX formats. Price $199.00

The second CD-ROM is the *Plaid Collection.* This CD contains a collection of 2D Image sequences designed to be used as textures and backgrounds in computer animation. Included are texture and transparency maps for 3D objects, compositing and special effects. Featured are real fire and explosions, rain, smoke, lightning, plus a 40 object 3D sampler section. Price $29.00 (see page 15 for order information).

SURFACE EFFECTORS FOR MULTI-PLATFORMS

One of the newest plugins for the Intel Platform, *Surface Effectors*, has been ported to the Amiga and DEC Alpha platforms. Surface Effectors allows a user to tag null objects in your scene with surfacing attributes such as color, diffusion levels, luminance, specularity, reflectivity, etc. By animating these null objects, you can achieve some very dynamic surfacing effects. Check out the cool animations created with Surface Effectors on this months Lightwavin' CD-ROM. Price $90. (see page 14 for order details)

PENTIUM PRO 200

Desktop PC's are getting faster and faster. In fact, by the time you buy your brand spankin' new top-of-the-line PC and install it, the next generation of faster, better, new top-of-the-line PC's are being boxed up and getting ready to ship out to dealers. For this reason, a lot of you wanting to upgrade may be waiting to see what the next best thing is going to be. Well, the Pentium Pro 200's have been shipping for some time now and we've been asked how much faster are they than the other Pentiums? Here's some benchmarks using the depth of field (DOF), Textures and Zbuffsort scenes based on systems with 128 Megs of Ram :

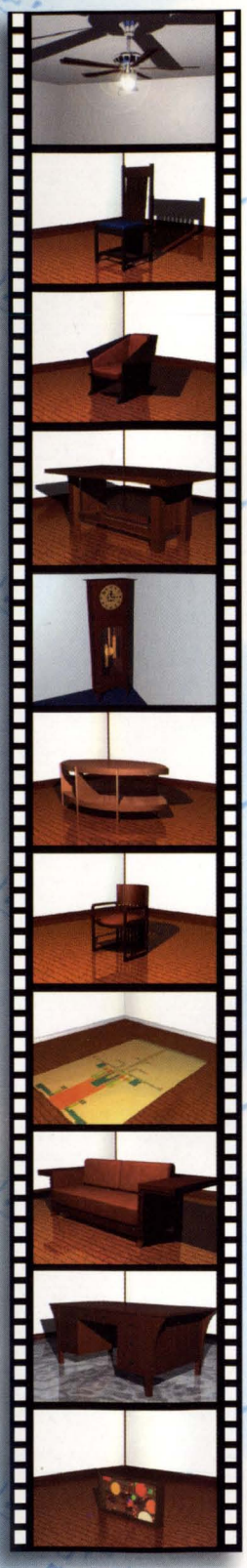
SYSTEM	OS	DOF	Textures	Zbuffsort
Pentium 100	Win95	402 secs	123 secs	306 secs
Pentium 133	NT	348 secs	104 secs	229 secs
Pentium Pro 200	NT	167 secs	50 secs	135 secs
Pentium Pro 200	Win95	167 secs	51 secs	136 secs

As you can see, the Pentium Pro 200 is approximately twice as fast as a Pentium 133. On an interesting note, there did not seem to be any significant speed increase the new optimized Pentium Pro chips when running Windows NT 4.0 versus running Windows 95. If you need the horsepower, being able to render twice as fast as a Pentium 133 might well be worth the extra money for the new PP200's. The 133 MHz Pentiums are being sold as a base system in most computer and electronic stores, and will soon be pushed out by the faster, more efficient Pentium pro series of systems. As these quicker systems are released, we'll be sure to bring you some more information from the chip front. ■

REPLICA Technology

The 3D Object Company

Replica Technology's 3D Object Libraries are the most comprehensive collections available. Every detail is attended to, nothing is overlooked. **Replica Technology's** 3D Objects are real-world scaled, completely textured and fully animatible, making them ready to just load and render.



The Wright Collection

Capture the Spirit of the Master...

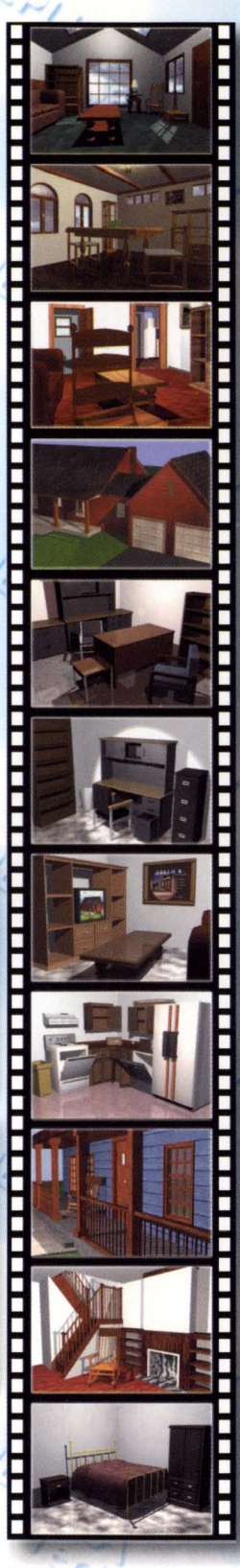
The Wright Collection captures the spirit of this incomparable master through simple and unified models utilizing natural materials and finishes.

The basics of Wright's designs, including furnishings, textiles and room spaces are all represented in this collection. As a complement to any interior environment, The Wright Collection is unequaled.

The Wright Collection

Includes:

- 145 Real world scaled, beautifully textured models.
- Over 50 texture maps of custom textiles by Wright.
- All object hierarchies are intact.
- Four Room Scenes from such famous Wright houses as the Taliesin, Robie, Midway Gardens & Coonley Houses.
- Complete lighting section included.



The Interior Design Collection

The Home of Your Dreams...

The Interior Design Collection has everything you need to create complex residential and office scenes.

The Interior Design Collection

Includes:

- 50+ Living Room, Dining Room and Bedroom Furniture objects.
- 50+ Bathroom and Kitchen objects including Appliances.
- 50+ Office Furniture objects & Furnishings.
- Four complete Homes with working Doors and Windows.
- 120+ Construction items like windows, doors, stairs, walls, moldings, fixtures, etc.

Create your own home environment!

Coming Soon...

The Dark Ages Come to Life...

The Camelot Collection brings the mystery and chivalry of the Middle Ages to your favorite 3D application. Historically accurate models, vivid photo-realistic textures and a wealth of preset scenes make this the most complete medieval collection yet.

The Camelot Collection

Includes:

- 350+ real world scaled, textured, historically accurate models.
- Over 150 24-bit image maps for added realism.
- Dozens of Load & Render scenes, like Chapel, Great Hall, Storage, Blacksmith, Royal Apartments, Towers & Prison Tower.
- Complete lighting with animated torches and fireplaces.
- Animated Flags and Tapestries.
- All Doors open and close.
- All object hierarchies are intact.

Everything needed to bring the Dark Ages to life!

The Camelot Collection

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INEXPENSIVE TREES!

Creating Trees In Lightwave That Wont Break Your Polygon Bank

by Ace Miles

Lately in the Lightwave community there has been a lot of talk about trees and how to create them. Some have suggested using programs outside of Lightwave or the Verti-Lectric plug-in to create geometry for trees. These are good ideas, but need huge numbers of polys to look realistic. Others have suggested using an image of a real tree mapped on a flat polygon, along with a clip map. This works well, if you don't move your camera too much. And long ago in an old version of Lightwave that shipped with the Toaster there was an amazing tree that Ron Thornton created leaf by leaf. This was not only an enormous number of polys but must have been painfully slow to create.

Recently I needed to landscape an outdoor scene with a huge number of trees and bushes. The camera was flying through the shot, chasing a ship that was flying through the landscape, blowing things up. To make matters worse this was set at dusk. Some trees were lit by street lights and some were backlit by explosions. They needed to be low-poly count yet detailed. That's when this method hit me.

There are actually two different versions of the foliage. Version one has about 400 polygons, but can be manipulated by bones or displacement maps to simulate a gust of wind. The second version only uses 7 polys or so, but looks very similar to the high-poly version at almost all angles.

Tree Top One

To start, enter Modeler and create a box using the default settings in the Numeric requester (Objects) then Make. Select the bottom polygon and cut it out. Use Bevel (Multiply) with an inset of 0 and a shift of 500mm. This gives you an interesting shape that we are about to make more interesting.

Select Subdivide (Polygon) and in the requester choose metaform then press OK. Repeat the last step. You should now have 400 polygons in an odd, five sided blob. [figure 1]

Now to make it look more bushy. Select Triple (Polygon), this doubles the polygon count but keeps it from tearing apart in the next step. Select Jitter (Tools) and in the requester choose Guassian with a setting of 200 mm in X,Y and Z. Press OK and your blob becomes a messy blob. Move the mess up the Y axis by selecting Move and Numeric (Modify), enter 2.5 m for Y and 0 for X and Z. [figure 2]

Use the Surface button (polygon) or (q) to create and apply a surface name for your new found foliage. Give it a name like... Foliage. Save this object with a really unique name such as "TreetopA.lwo."

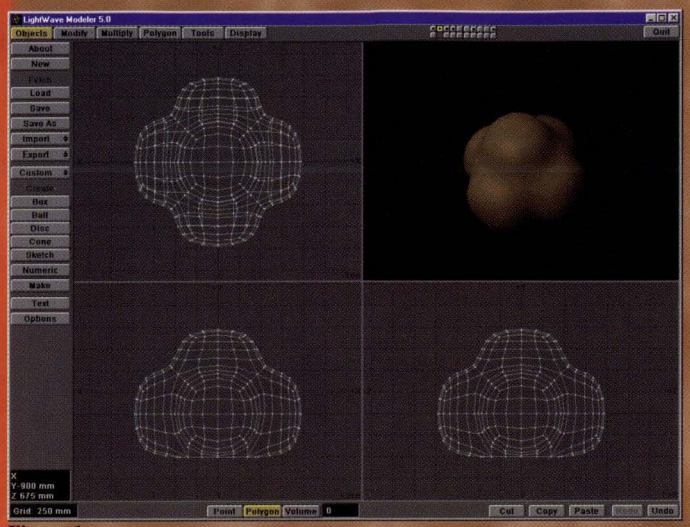


Figure 1

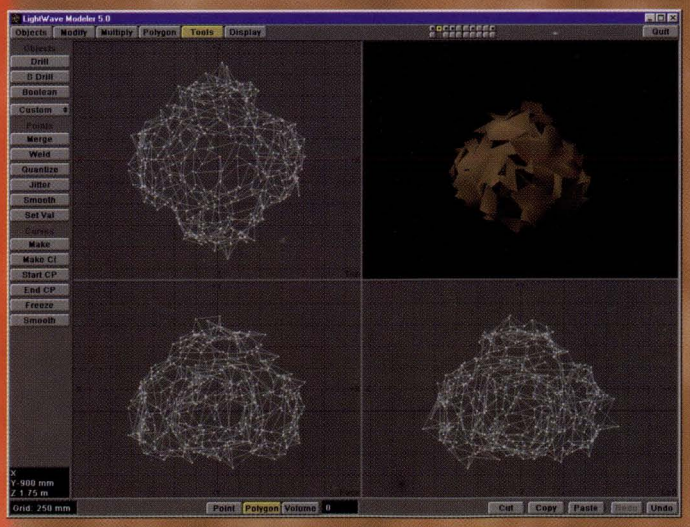


Figure 2

Tree Top Two

Place the first tree top in a background layer as a template. In a new layer and in the FACE view, start outlining the shape in the background layer. To do this use the create points tool (Polygon). Make the outline fairly rough and jagged. When you've done this hit (p) on the keyboard to create the polygon. Now select the polygon, copy it and paste it back in. With the first poly still selected place your cursor in the top view directly in the center at 0,0 on the X and Z axis. Hit (r) on the keyboard to rotate the poly exactly 90 degrees. [figure 3]

Figure 3

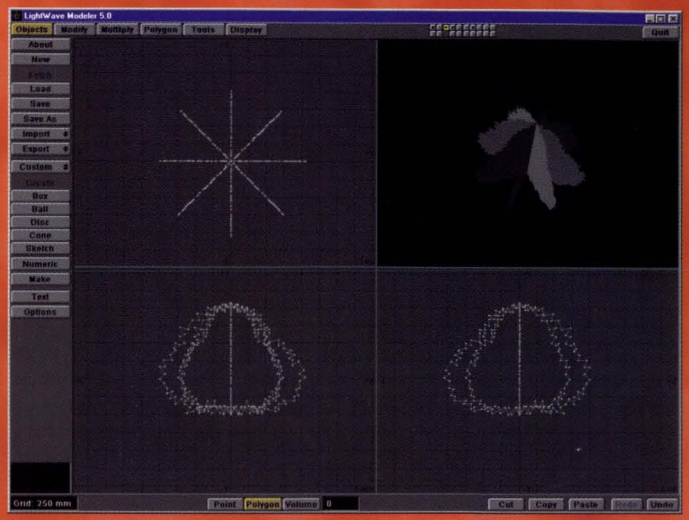


Figure 4

Select both polygons and hit (y) then (n) on the keyboard. In the the rotate numeric requester enter an angle of 45 degrees. Make sure the axis is Y and the centers are at zero then hit OK.[figure 4]

Make these polygons the background layer. In a new layer enter points again this time in the TOP view. Create a jagged edged disc shape that is just a little smaller than the other polys in the background. [figure 5]

Select this poly and copy and paste it. Use the size tool in the top view to shrink the selected poly down a little so it's about the width of the top area of the polys in the background. Copy this poly and paste it in. Now hit (t) on the keyboard and position the selected poly near the top of the tree. Deselect the poly and select the other smaller poly. Hit (t) again and move this polygon down about the same amount. [figure 6]

Now save this as "TreetopB.lwo". The surface should still be "foliage".

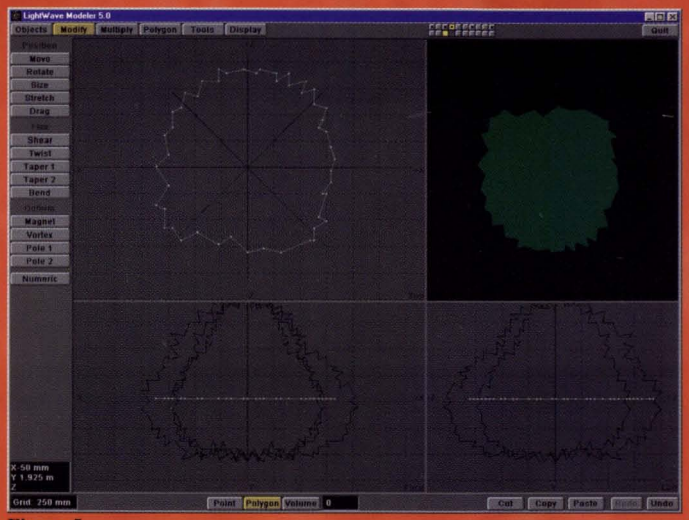


Figure 5

The Tree Trunk

In an empty layer create a disc with the following settings in the numeric requester:

Sides:5
Segments:5
Bottom:0
Top:1.8m
Axis:Y
Center:0,0,0
Radii:250mm, 0, 250mm
Units:meters

Press OK and select Make to create the disc.

Select the polygons on the ends of the tube you just created. You can do this manually or in polygon select mode hit the (w) key. This brings up the polygon statistics requester. Press the + button next to the field that shows you 2 >4 Vertices.

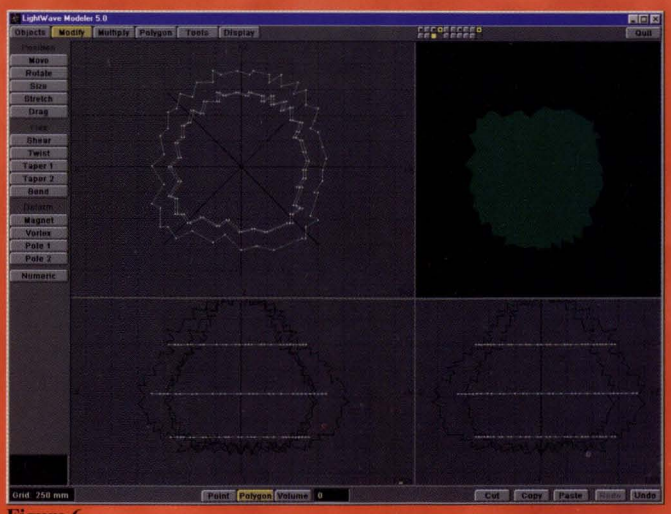


Figure 6

Cut the two selected polygons. (This step lets you metaform properly later).

Select the five points at the top of the tube and Move (Modify) them down the Y axis -200mm. Deselect the points.

Select the Taper2 tool (Modify) then numeric or (n) and in the requester enter the following:

Axis: Y
Range:Automatic
Sense: +
select Ease-Out
Factors: .4, 1, .4
Center: 0,0,0 Units: meters

Press Apply to taper the tube.

Roots

Select the five polygons in the bottom segment and hit the (b) key to bring up the Bevel (Multiply) requester. Enter an Inset of 70mm and a Shift of 200mm, press OK. With the polygons still selected hit the (t) key to activate the Move tool (Modify). Move the polygons:
X:-50mm Y:-100mm Z:0.

Hit the (b) key again and enter an Inset of 20mm and a Shift of 200mm, press OK. At this point the Move tool should still be active and the five polygons should still be selected. Move them X:50mm Y:-50mm Z:0.

Hit (b) one more time and using the same values press OK. Now Move them one last time X:-50mm Y:-50mm Z:50mm. Deselect the polygons.

In point select mode, use the right mouse button to lasso only the points on the tops of the roots we just made. Do not select any points connected to the trunk. You should have 30 points selected. Hit the (t) key and Move the points -100mm in the Y axis. Deselect the active points.

Branches

The branches are very similar to the way you did the roots. However, there are a couple of differences. The branches are going to reach upwards toward the foliage and all branches should have random bends in them.

Select the five polygons in the top segment. Hit the (') key to invert the selection. Now all the polygons except the top five should be selected. Hit the (-) to hide the selected polygons. This will make it easier to see what you're working on.

With the tree trunk layer still in the foreground put the tree top in the background layer. This will allow you to position the branches properly as you create them, using the tree top as a guide.

Select the polygon from the top segment of the tree trunk, who's surface normal is facing the word Top in the top view. This is so you be able to follow the next steps without having to make any changes.

Hit (b) and bevel the polygon with an inset of 20mm and a shift of 200mm.

With the polygon still selected, use the Taper2 tool (Modify) with the following settings:

Axis:Y
Range:automatic
Sense:+
Factors:X:0.8, Y:1, Z:1
Center: 0m, 0m, 0m
Press Apply.

This aims the polygon a little more toward the tree top.

Move (t) the selected polygon X:0, Y:80mm, Z:-40mm.

Bevel (b), With an Inset of 10mm and a Shift of 200mm. Press OK.

Move (t) the polygon X:-40mm, 140mm, 60mm

Bevel (b) again. This time with an Inset 10mm and a Shift of 100mm.Press OK.

Holding the (Shift) key select one of the polygons on the side of the last box that was made by the bevel function. You should now have two polygons selected that are connected but at right angles to each other.

Bevel both these polygons by hitting (b) and using an Inset of 10mm and a Shift of 100mm. Press Apply. Deselect the polygon on the end of the new off-shoot branch (the short fat stub).

Move (t) the selected polygon that is on the tip of the branch X:40mm, Y:180mm, Z:-80mm. Deselect the polygon and reselect the polygon on the end of the off-shoot branch.

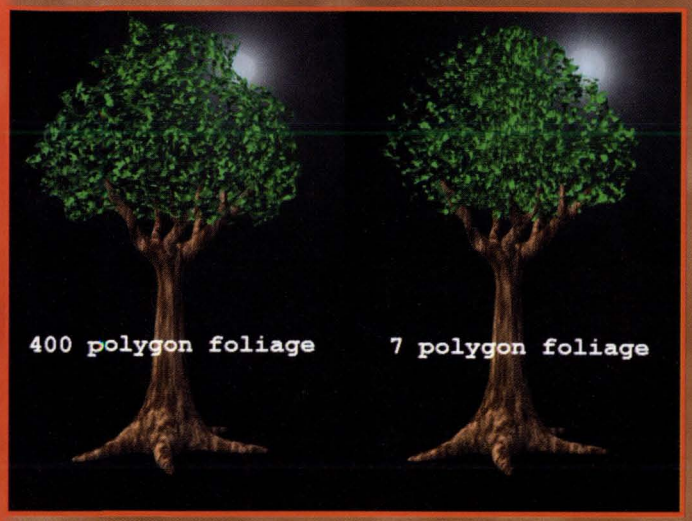
Select Taper2 (Modify) hit (n) and enter these settings:

Axis:Y
Range:Automatic
Sense:+
Select Ease-Out
Factors: X:1, Y:1, Z:.75
Center: X:0, Y:0, Z:0
Press Apply.

Hit (b) and Bevel the selected polygon with an Inset of 20mm and a Shift of 100.

Move (t) the same selected polygon one more time X:0mm, Y:100mm, Z:50mm. For the rest of the branches, repeat these basic steps. However, you will want to make a few changes as to the angles of your Tapers. You should also vary the directions and amounts you move in between each bevel. If you do this for each branch you will have a nice random look to your tree. [figure 7]

Figure 7



The finished versions of the two trees.

Select Surface (Polygon) and give all the polygons in this layer a name. I named mine tree_bark.

Make sure all of your polygons are deselected. Select Subdiv (Polygon) and choose Metaform. Press OK and there you have the completed lower portion of your tree. Save this as "Treetrnk.lwo".

The Cool Part

Go into Layout and load the "treetopA" and "treetrnk" objects. Parent the tree top to the trunk.

In the surfaces requester select the foliage surface and enter these settings:

Color: 0,75,12
Specular: 20
Transparency Settings:
Fractal Noise
Size: .025 .025 .025
Value: 150
Frequencies: 4
Contrast: 5
Bump Map Settings:
Crumple Size: .5 .5 .5
Amplitude: 200
Scales: 3
Small Power: 2.0

Turn on double sided and save the object to keep your settings. You may also want to save this surface as "foliage" so surfacing the "treetopB" object will be as simple as loading the surface.

As an afterthought I decided to add some larger holes in the foliage here and there. Under the objects panel make the "treetop" object the current object and open the clip map panel. Enter these settings:

Fractal Noise
Size: .05 .05 .05
Value: 100
Frequencies: 3
Contrast: 2.0

These settings can be changed to vary the density of your foliage. If you decide to use a clip map, don't forget that the information is not saved with the object, but with the scene file. So, save this scene as "tree.lws" and when you need the tree use the "load from scene" option.

For the trunk surface you may want to apply a texture mapped image of bark. Or just give it a brown color and a "crumple" bump map.

Finishing Up

The foliage surface can be quite convincing, particularly when backlit so you can see through the gaps between the leaves. You may want to add a fractal noise pattern for the color or diffusion to vary the colors of the leaves as well.

I used the "treetopA" for distant shots and the higher detail version when I get close with the camera. One more note about shadow maps. You may choose to have the trees casting shadows, in which case you will want to use the settings for the transparency in the clip map requester. This will let you cast a shadow map through the tree.

Ace Miles is a Senior animator with Atari Games/Williams Entertainment. Currently he is also a Lightwave instructor at the Academy of Art College in San Francisco. Look for Ace's training tapes entitled "Project Modeler". Ace can be reached at ace@got.net

SURFACE EFFECTORS

MAG-O-MERCIAL ROUGH DRAFT 9/18/96

Fade up from white. Music In.

Niki: Hi, I'm Niki Surfhammer, spokes-object for Surface Effectors, a nifty plugin designed for Lightwave

Bob: and I'm Bob the Surfer, her faithful sidekick.

Bob: Now, you might be asking yourself, what is a Surface Effector?....well, Surface Effectors is a plugin for Lightwave 4.0 or 5.0 that allows you, the Lightwave user, to tag null objects in your scenes with surfacing attributes (color, diffuse level, luminance, specularity, reflectivity, transparency, and index of refraction) and by animating those tagged nulls, achieve truly dynamic surfacing effects. Watch this!

Bob moves over close to Niki, turning half green.

Bob: Wow, Niki! you really have an effect on me!

Niki: Yeah, well I....

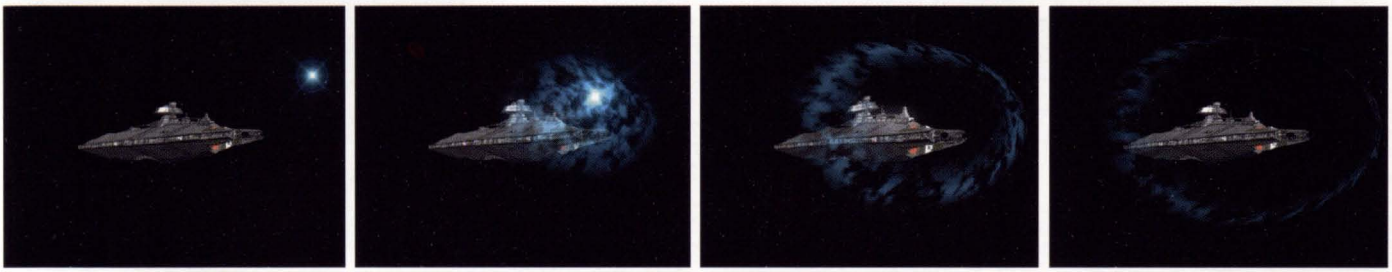
Bob: Is it her perfume? Nope, see, Niki has within herself a Surface Effector that influences my color and transparency. You may also notice that the effect is not quite even...well, that's the animateable fractal noise texture included in Surface Effectors, and by animateable, I mean that you can **move, scale, and rotate this fractal texture simply by moving, scaling, and rotating** a single null object. Right, Niki?

Niki: That's right, Bob, you....

Bob: Using Surface Effectors, you can create stunning animations like the following in record time.

Cut to the following sequence of animations:

Animation 1 - Star Destroyer defense shields getting hit by a torpedo - effect done using Surface Effectors. "Sci-fi" sounding music.



Animation 2 - Bring in "Bonanza"-like western sounding music and an anim with SE doing a burn-away reveal.

Bob: Wow! those still give me the goosebumps...don't they, Niki?

Niki: Bob, **I'm** supposed to be the spokes-object, and you haven't let me get a word in edgewise!

Bob: ***[Smiling sheepishly - wait, scratch that, he doesn't have a mouth]*** Gosh, Niki, I'm sorry...why don't you tell the folks how much SE is and how to order it.

Niki: Thank you! Surface Effectors is available on Intel, DEC Alpha, Amiga and SGI platforms. The cost is $90*. To find out more about Surface Effectors, you can visit the SE homepage at:

http://star.noblestar.net/~prems/surfeff.html

to order Surface Effectors, you can call Prem Subrahmanyam Graphic Design at:

(904)575-6051 (between the hours of 11 AM and 6 PM Eastern time).

or you can send e-mail to:

prems@star.noblestar.net

I think you'll be glad you did.

Dissolve to final scene:

Fade to white, music out.

SURFACE EFFECTORS

"Do I have an effect on you?"

*Price subject to vary without prior notification. For current pricing, please call Prem Subrahmanyam Graphic Design at (904)575-6051 or check out the Surface Effectors Homepage at http://star.noblestar.net/~prems/surfeff.html

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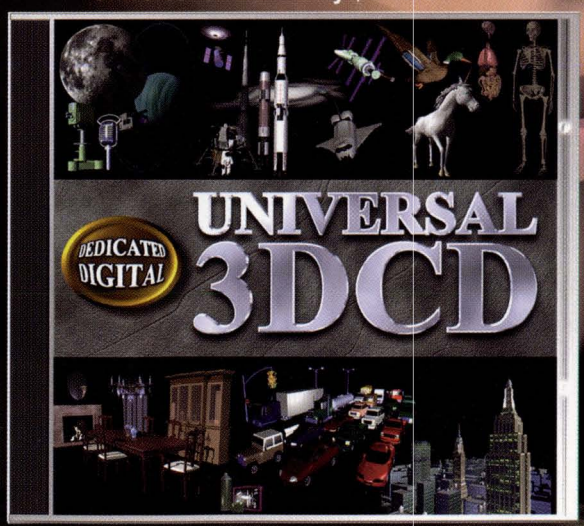

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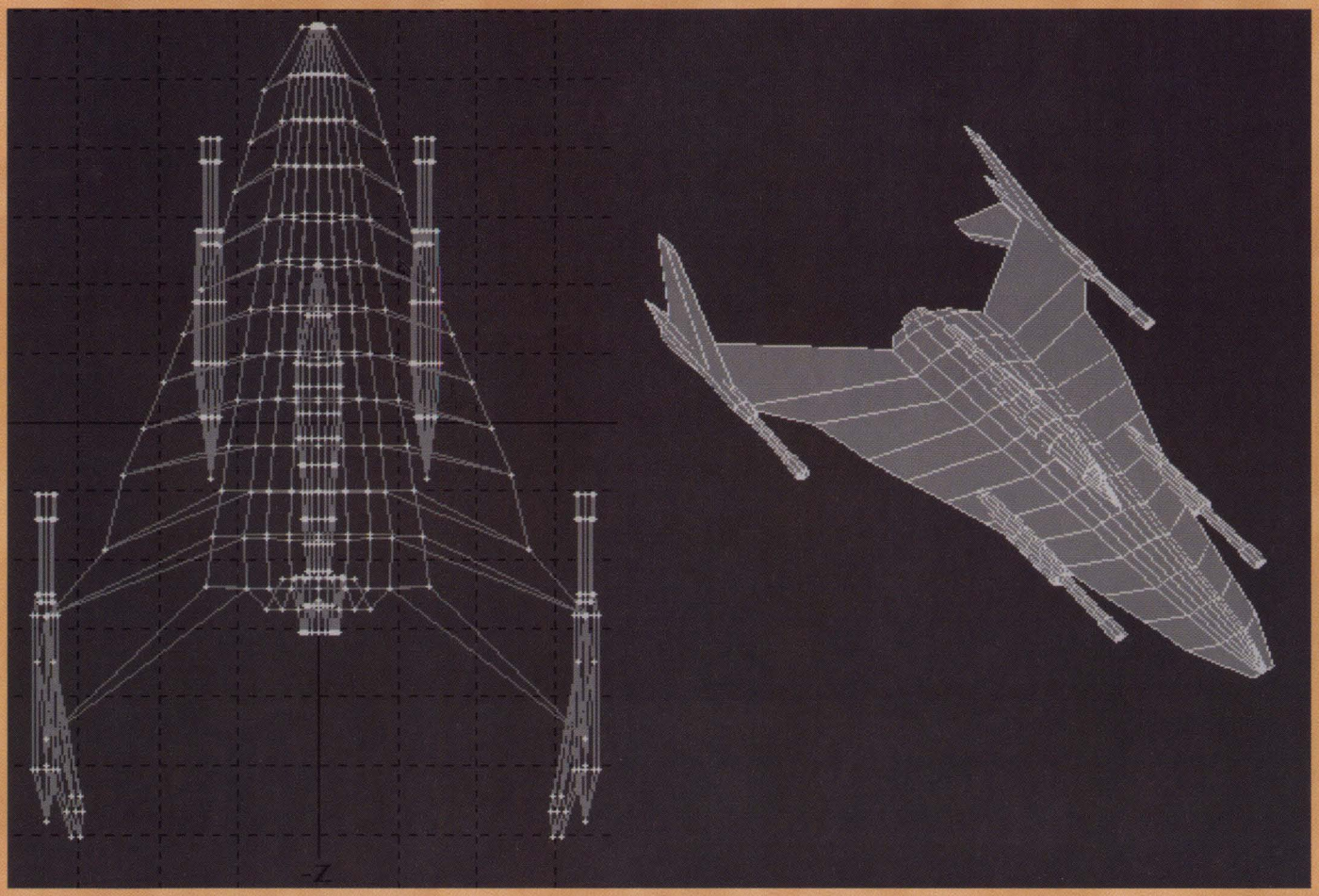
POLYGON REDUCTION
Part One

By Jason Booth



The Space Fighter object on the right has 1410 triangles. The one on the left has only 564, yet there is barely a difference in the rendered output. Optimizing your models is not only useful in game creation, but can speed up your rendering dramatically.

Welcome to the first of many articles on 3d game creation with Lightwave 3d. I will be covering a wide variety of topics, all relating directly to creating content for real time, 3d game engines. Game engines vary widely in the way they work, so rather than concentrate on one engines specific features and cevets, I'll attempt to address a wide range of issues, work arounds, and general lightwave techniques that are used. If you are already producing games with lightwave, I'd love to hear about them, and the way you and your programmers have used lightwave to aid in your production.

Real-time 3d games are limited in the number of polygons which they can draw at one time, and because of this, mesh optimization is crucial to having a fast moving game. Many games support L.O.Ds (Level of Detail), which often requires a modeler to create objects in multiple resolutions so that lower polygon versions can be swapped in when the game is moving too slowly, or the object is too far away to need as many polygons. Although algorithms have been developed to do this automatically, this functionality does not currently exist in Lightwave. Besides, I've always found doing them myself yields better looking results.

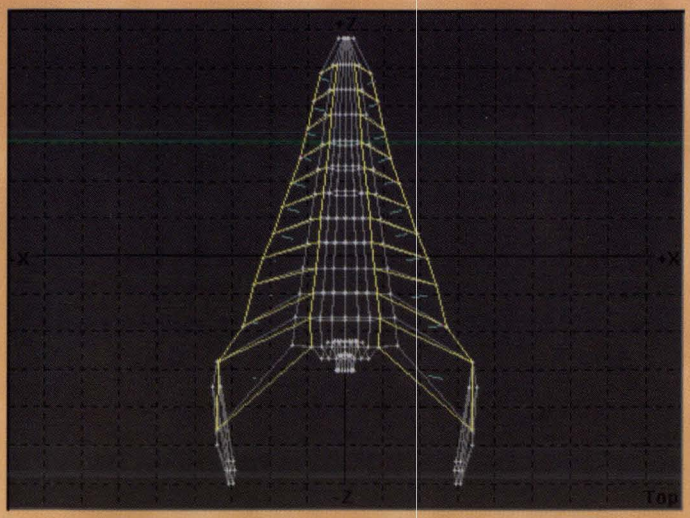


Figure 1

What You Don't See Can't Hurt You

The key is in deciding what detail is absolutely critical, and what detail is less important. There are several factors to consider. First, is your rendering resolution. Most games render somewhere between 320x200 and 640x480, which means small details are not likely to be noticeable. Most of the time, the object will take up a small fraction of that screen space, meaning even less detail can be observed. Also, an object darting around the screen very fast is even harder to notice details on. The point is, don't get worried about cutting too much detail - A fast running game will always look better to the user than a slow one that has higher polygon counts.

That said, I usually break my work into two stages: unnecessary detail removal, and further simplification. I'm going to perform the first of those stages on the Space Fighter object, which is included with the Lightwave CD. Lets take a look at the mesh. (See Figure 1)

Less Is Better

The first thing I see is that the wings and body, essentially flat plains, are subdivided into many polygons. These sections could be represented much simpler, with little, if any degradation of quality.

Begin by removing the gun turrets and cockpit, we'll work on those later. Next, select each strip of polygons in the wing and body area and merge them together. (See Figure 2)

Knocking It Down Even Lower

Don't worry about non-planar polygon problems, as we will take care of them much later. The body of the ship, if viewed from the back, is basically a 12 sided cone. We could easily get away with only 8 sides, so merge every other strip into the strip next to it. Select the points shown in figure 2 and delete them. Notice that these points barely add any detail, as they lie along relatively straight lines.

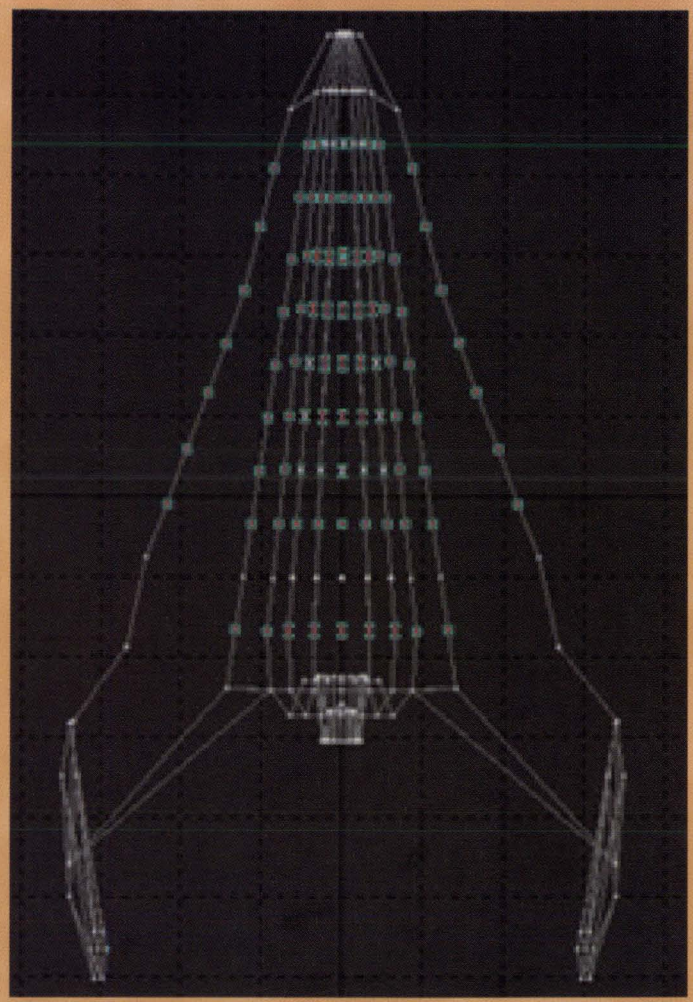


Figure 2

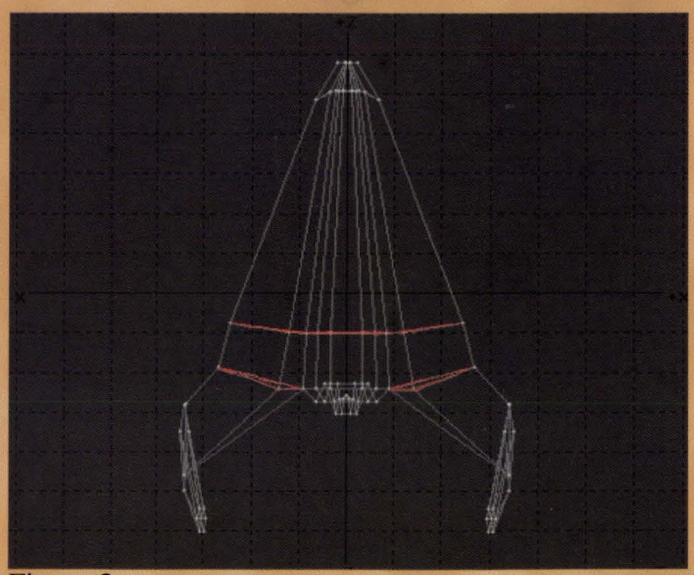


Figure 3

Repeat the process exactly the same for the nose of the ship, and again for the exhaust pipe. When you are done, delete any point that lies between the merged polygons, as we will not need them. Next, we will need to split the complex polygons along their most important edges. Do this by selecting the polygons, then selecting the two points which the polygon will be split from,

and select polygon->split. The lines shown in red should now be in your model. (See Figure 3)

Step Back And Take A Look

Take a good look at your model in OpenGL sketch mode. Sketch mode shows off the vertex lines very well, while still showing polygon facing. Make sure you didn't miss any polygons when doing your merging or splitting. Simplify the nose and exhaust ports further by removing unnecessary points. For instance, the tip of the nose is made up of 16 points, this kind of detail is just not necessary.

Weld nearby points together. This will turn many of the quadrangles in the nose into triangles. In my model, the nose is only 5 points - But even this could be considerably less. Finally, select any non-planar polygons, then cut and paste them into another layer. A simple triple will work, but you may want to manually split them. Often the triple algorithm will triple one side of the object differently than the other, which will destroy your simitry. Other times, a 5 (or more) sided polygon can be split into one, planar, four sided polygon and one triangle instead of 3 triangles. Some game engines support greater than 3 sided polygons, so keeping higher polygon order might be an advantage.

The exhaust port and tail fins can be simplified by removing "thickness" polygons. The top of the tail fins, for instance, is a four point polygon - this polygon can be removed, and it's points welded together to make the tail fin come up into a point, the difference is barely noticeable.

Use the exact same procedure of merging polygons, removing points, and splitting important complex polygons to simplify the gun turrets and cockpit. Also note that both the exhaust port and guns were modeled with intersecting polygons. Many game engines will not draw intersecting polygons correctly, so this should be remedied as well. To remove all the intersecting polygons, you would have to boolean the cockpit and guns into the ship. Save this step for later, as when we build several lower resolution versions of the ship it will cause us problems.

Comparisons Reveal

A great way to check your work is to place the original model in a background layer, while in sketch mode, and compare the two models. The shape should be nearly identical, and any areas where it isn't should be easily visible in this mode. (SeeFigure 4)

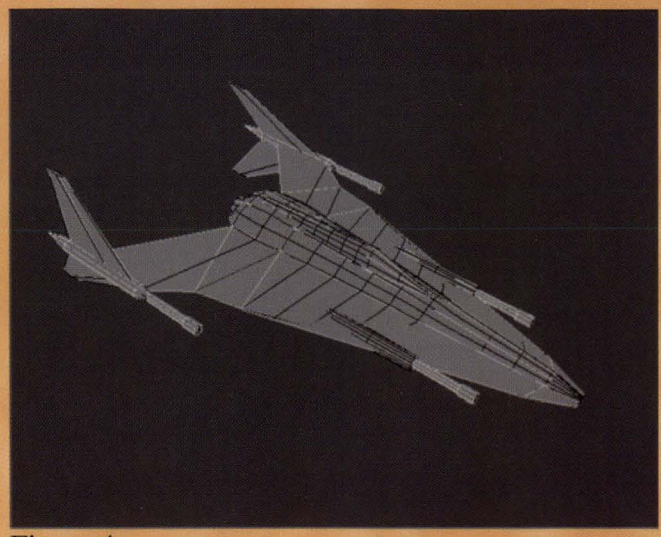


Figure 4

These techniques can easily get you down to the 564 triangles shown in the space fighter above, which, is still a lot of polygons by today's standards.

In the next issue, I will cover techniques to get you down even further, and produce several versions of the space fighter, in less and less detail, until we reach a version some where around 50 triangles. I've included a few things on the CD to help this tutorial. The first is an animation (in .avi or .jpg formats) of every step of the process. If you didn't understand something in this tutorial, it should answer your questions. There is also an animation of both the original and reduced polygon version of the space fighter for comparison.

Jason Booth is a Lightwave artist specializing in real time games graphics, currently working for Second Nature Interactive. He can be reached by e-mail at Jason@2ni.com or through his web page, where you'll find useful lightwave plugins and tutorials, at http://www.tiac.net/users/truffela.

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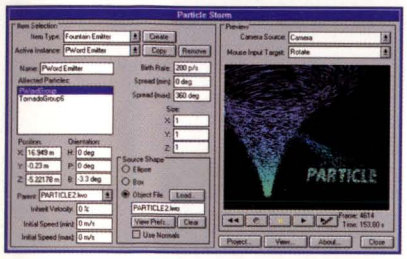

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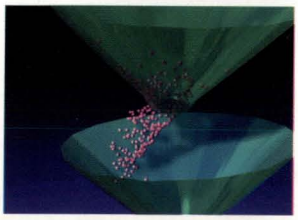

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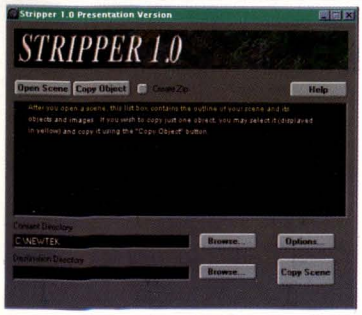

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INTERVIEW WITH ALAN CHAN

The following is from a video interview on the new *TutorVision 3-D/CD ROM* (see page 3).

As you may know, Alan Chan is the author of the very popular FX book series. He wrote the *FX Kit for Lightwave* about a year ago when there weren't any good books covering the Lightwave platform. The book was a great success so he decided he would write another book covering the new feature in Lightwave version 5.0. and behold, the *Power FX 5.0 Addendum* book was born and published in July of 1996. This new book did equally well and continues to gain in popularity as more people are switching to Lightwave 5.0. Unbeknownst to most, Alan has been hard at work on his newest book, PhotoReal FX. This book should be available by the time you read this article (see page 2). Alan Chan now works at Digital Domain where I'm sure we'll see a lot more of his work on the screen. Hopefully he'll find the time to continue writing books for the Lightwave community.

Q We're here interviewing Alan Chan in his Santa Monica home. How did you come to using Lightwave 3D?

Well I started as a producer/director with a cable television company about 5 years ago. 3 years into that we bought a toaster to help with the editing, do CG works, transitions and stuff like that. When we got the toaster, I eventually started to use Lightwave. As time went on, I began making more money creating Lightwave animations than I did as a producer. So I began looking into doing Lightwave seriously at that time.

Q What elements of school did you find most useful in getting you to where you are today?

I think the most important element to getting ahead in this business is not so much knowing the technical aspects of Lightwave, but more a firm background in elements such as art design, cinematography, photography and stuff like that. When it comes down to it, Lightwave is just a tool that you use. It's what you know that makes a difference.

Q Is there anybody in your field of work that influenced you, and if so who?

Not really. I'm just a big fan of movies in general. Like most of my piers, I am one of the Star Wars generation.... I saw Star wars when I was 9 years old. That pretty much made an impact on who I am and what I'm doing now. So in a way you could say that George Lucas is somebody that I look up to, but otherwise there's not really anybody that fits that roll.

Q Why did you decide to write the FX KIT, POWER FX and PhotoReal FX books?

Well, I wrote them because back when I first began writing the books there was a lack of material out there for beginning Lightwave animators. A lot of the problems I saw in animators was that they didn't have a firm background in the elements we talked about, art design for instance. So a lot of these books are designed not to show you how to do a certain effect, but to understand how an effect is done so that you take that information and create something totally new & different for yourself.

Q What would you recommend to somebody who just got out of school and wishes to pursue a career in 3D animation?

If you just got out of school and are looking to pursue a career in 3D animation, my advice to you would be to practice...practice...practice! There is nothing better than learning by understanding. You can take a tutorial and go through it and do the same thing that the tutorial does, but if you don't understand what the tutorial is teaching you or if it doesn't make sense to you, that is a problem. You need to understand what it is that makes a tutorial work, and then when you understand that, you can apply it to your future projects.

Q Are there any books, videos, courses or anything else that you would recommend to others working to get into this field?

Books that I would really go for that would be a good benefit to you would be books on such things as art design, photography and cinematography. A lot of times, for instance in cinematography, the diagrams and lighting techniques they use in these books are directly translatable to Lightwave. You make your shots better and more realistic if you conform to the way that it is done in the real world. For instance, your lighting techniques should emulate what's in the real world, and when you do that, your shots immediately look better.

Q Most beginners have very low end systems and can't afford the super fast systems many professionals are using. What can they do to have a chance in this field?

First of all, a fast system does not equal quality. If you have the talent, it will show, regardless of what kind of system you have, whether it is a fast system or a slow system. Never forget that it is the animator who does the animation and not the machine. If you have the talent it will show regardless of the speed of your machine. It may take you longer to do something or it may take you twice as much work to do something, but eventually you will get it done. Once again, the talent will always show through.

Q How important are demo tapes and what do you think should be and not be included on them?

The demo tape is probably your most important piece of material because it is what represents you to potential employers or clients. The type of stuff you want to put on your demo tape is mainly the best stuff you have. Don't put everything you've done on there because you probably have some good stuff and some mediocre stuff. Just put the best stuff on there. Keep it short and sweet - anywhere from 1 minute to two minutes is fine. The upshot of that is that when somebody sees your tape, when your tape finishes, they should be left wanting to see more. If they want to see more at the end of the tape, they will come to you.

Q Companies seem reluctant to hire unless you have experience, yet you can't get experience unless you get hired. How can one get around this?

Well if you are starting out in this business and you need to get the experience for bigger companies to hire you, then my suggestion is to find a smaller company and start with that smaller company. Those are companies that are usually less established are more willing to take on somebody who doesn't have as big of a skill set, and to take chances with you, to teach and train you. What you can do is work your way through these companies. They will eventually provide you with the training and material for your demo reel which you can take to move on up the ladder.

Thank you for taking the time out of your busy schedule to conduct this interview. We look forward to seeing great things from you in the future.

Well it has been my pleasure. I hope that some of this information can benefit some of you out there and good luck! (As he gives the viewer two thumbs up).

■

VTU EXPO 1996

by Dave Thomas

The 1996 Video Toaster User Expo was once again held in Los Angeles, California at the Universal City Hilton. The show combines several days of Toaster and LightWave instructional classes along with a two day exposition of third party hardware and software for the Toaster and LightWave market. While the show was not large, the crowd was enthusiastic, and there were some interesting new items.

While NewTek was there with a large, impressive looking display, there was almost nothing new of note. The Mac version of LightWave was running on a mostly unattended computer, and seemed pretty stable, though it was still not entirely finished (it should be available by the time you read this, as well as the long awaited 5.0 versions for the SGI and Amiga platforms). Another disappointment was that there was no public showing of the announced LightWave plugins Morph Gizmo or Puppet Master. However, the people that attended the Wednesday night party hosted by NewTek reported seeing at least one of these programs in action. NewTek was running near constant demos of LightWave and the Flyer in one part of their booth throughout the show, and always had a crowd around.

There was plenty of powerful computer hardware on display. Carrera Computers and Deskstation Technologies both had their Alpha based workstations on display. Q Technologies was showing both Pentium Pro and Alpha based machines. Digital Semiconductor had a large display, showing both Alpha machines and the FX!32 software that allows Alpha machines to run 32bit PC applications. Intergraph Computer Systems was also there, showing their workstations and announcing that Render GL will be supported in LightWave. Rumor has it that there will be a new version of LightWave released in the first quarter of 1997 to take advantage of Render GL (as well as some other new features). No official word on this is available yet from NewTek. Many of the workstations around the show were equipped with the Oxygen 3D acceleration card from Dynamic Pictures. This card supports OpenGL and Heidi, and is available in several different configurations. While most of the machines at the show made my Pentium 150 system look like a C-64, it's great to see all the advances in technology. Whether you are interested in Pentium or Alpha based systems, there are many powerful computer workstations available in all sorts of configurations and price ranges.

Aside from the NewTek booth, the busiest booth seemed to be that of Dynamic Realities. They were running demo reels featuring Impact!, their physical simulation package for LightWave, as well as Particle Storm, the particle effects plugin. Lock and Key, the plugin that allows dynamic parenting of objects in Layout was also on display. They were also running these programs on their machines, as well as showing their latest package, Shaderman. This new plugin adds twenty or so shaders to LightWave. Among the different shaders are ones for brick, glass, clouds, fire and many others. The results from these shaders were very impressive, and it looks like the folks at Dynamic Realities have another great plugin.

I didn't notice any fights around the Miller Freeman booth, which given some of the attitudes of the readers of Video Toaster User and LightWave Pro, would not have surprised me. For those who might have missed it, the company shut down both magazines a few weeks before the show. The company was there representing 3D Design and DV magazine, and was selling the "Best of LightWave Pro" book/CD-ROM combination. The company has stated in their press releases that they will continue to support the toaster/LightWave market by inserting twice-yearly "reports" on these topics into the above magazines.

Desktop Images, the provider of many Toaster/LightWave instructional videos, had some new titles for sale at the Expo. The series of tapes with Foundation Imaging's Ron Thornton continues with "Cinematic Visual Effects" and "Digital Cinematography." These tapes show the use of LightWave and Photoshop to create film style SFX, and cover compositing, lighting, explosions and much more. For the Flyer user, there are two tapes available featuring Flyer master Stan Shumlick, "Video Toaster Flyer Essentials" and "Video Toaster Flyer Advanced Techniques." Desktop Images also have a full line of Toaster and LightWave instruction tapes, ranging from beginner to advanced.

Another provider of video instruction, ProWave, had a new video for sale. The latest tape in the "InFocus" series from LightWave God Mark Thompson is entitled "Advanced Character Modeling." As the title implies, it takes the viewer on an in-depth look at how Mark constructs his character models. The tape shows character construction, making clothing for characters and how to properly set up these models for animation. ProWave also sells the first two tapes in Mark's series (dealing with Layout and Materials and Textures respectively), as well as a series of tapes aimed more at the beginning/intermediate LightWave user from Dan Ablan, renowned LightWave artist and author of the recently published "LightWave Power Guide". Advanced Flyer users will want to check out the "Flyer Flight Notes" series hosted by Don Ballance, which covers many tips and tricks to make your Flyer editing sessions more productive.

In my opinion, one of the most impressive pieces of software at the show was MacroForm from One And Only Media. The package includes a variety of Modeler plugins that allow you to shape models with curves. You can interactively change the shape of the curve and the model will be adjusted accordingly. By using the various tools to scale, bend, twist or extrude with curves, it is possible to create models that would be almost impossible or at least extremely time consuming to create in Modeler. Combining these plugins with MetaNURBS objects allows for really interesting, organic looking shapes to be created in a short amount of time. I was so impressed I bought a copy.

If you have ever used the PennelloLite plugin that comes with LightWave and wanted more power, you will be happy to know that PennelloPro is now available from Xaos Tools. This version of the plugin allows you to control all the parameters of the brush engine, including the color, size and angle of the brush strokes. The effects can be animated over time, and the program

allows you to preview the effects and save your favorite combinations. A wide variety of effects can be created with this plugin, from "painterly" effects to stuff envisioned in your strangest dreams. Xaos Tools was also showing plugins for the Macintosh version of Photoshop, including TypeCaster (3D text effects) and Paint Alchemy 2 (paint effects).

Nova Design was there, showing Image FX, one of the best image processing programs available on any platform, but only available for the Amiga (and to remain that way, according to the company). Image FX features a ton of image manipulation tools, paint tools and supports just about every file format available. It also features the ability to use its tools in batch processing mode, making the application of effects to a series of frames easy. Though not on display, Nova Design has added Aladdin 4D to its product stable. The company plans to release a new version of this Amiga 3D animation program. Also, Digital Dominion, a division of Nova Design, announced a new product called Cinematte, a blue/green screen compositing plugin for Photoshop.

The folks at Lightspeed had several new products that they are distributing. The brand new book from Alan Chan, "PhotoReal FX, " contains information on the use of lighting and other techniques for the best results at achieving photo-realism within LightWave. The Project Modeler tape series features renowned and super talented LightWave artist Ace Miles taking the viewer on an in-depth tour of Modeler, showing you many of the tips and techniques he has developed over the years to create great looking models in the program. And the master of the LightWave mailing list, David Warner, was there showing his new product, Tutor Vision 3-D/CD. This CD-ROM contains a wealth of LightWave information, including interactive tutorials, product reviews, an interview with LW master Alan Chan, 3D objects, images and much more.

The LA Video Toaster User's Group had a display at the show, where they answered questions and handed out literature explaining their organization. The also had a mini-theater set up where they were running demo reels of many of their members. Also present at their booth were Joe Clasen And Susan Ishida, touting their new video "The LightWave Lab Volume One: Characters." This video is devoted to character creation and animation, and even contains information on the use of Morph Gizmo, the yet unshipped/unseen by most of us character facial animation plugin. The group also ran the "LightWave Lounge" after the show on Thursday night where many, many LightWave reels were shown. Also run during the program was this years "Mr. Bill's Christmas Special" that featured some LightWave animation, and was very funny.

The Humanoid series of objects got their start in Imagine, though they have since been ported to LightWave where they have appeared in many, many animations. Animators will be interested to learn that the latest version of Humanoid now contains four seamless models. All the models have been setup with Bones, and are constructed with the use of Full-time Inverse Kinematics in mind. The package comes with a library of new motions and face mapping templates for the figures. Previous owners of the package from Crestline Software will be interested to learn that the upgrade fee for the package is only $50. The objects look great, and are some of the best human figure models available for any 3D package.

Would you like to have access to faster Anti-Aliasing and Depth Of Field effects in LightWave? Then WaveFilter from Unlimited Potential is the package for you. This Layout plugin uses null objects to control different parameters in a scene. Besides the parameters mentioned above, you have control over RGB values, brightness, contrast and many, many others. Since the position of the null controls the amount of each effect applied to the scene, animating the nulls allows you to animate the effects over time. This can create effects like animated rack focus or changing image processing effects throughout a scene. The anti-aliasing routine is faster than the one in LightWave, and produces better results when set at comparable levels. The new WaveFilter Shader adds a ton of new effects to work with, including control over transparency, specularity, reflection, refraction and more. This is an amazing package, and one that really adds a lot to the functionality of LightWave.

VCE had a booth showing their Pyromania packages which have been used on many television programs and films. These two CD-ROM volumes feature explosions, fire, smoke and sparks that were filmed on 35mm film, scanned at 2k resolution and then resized into various file sizes for the CD-ROM. New from VCE is a collection of Time-lapse Cloud sequences available on a variety of video tape formats. The Time-lapse Cloud tapes and the Pyromania discs are both royalty free, meaning you pay for the product and then use it as much as you want in your production.

Viewpoint Datalabs was handing out their latest huge catalog of 3D models covering almost every category. The models are available for just about every 3D package in existence and are available separately or in collections. These can be ordered from the catalog, or if you use their CD-ROM, "unlocked" after using your credit card. The models are not inexpensive, but they are of very high quality and can be a great time saver on a short deadline project.

While the show was called the Video Toaster Expo, there wasn't a lot of Toaster/Flyer items on display. This market is not as big as it used to be, and probably will not grow unless NewTek can get their announced but still not shipping PC Toaster/Flyer to the market. Still, there were some companies with products for the Toaster. Megagem Digital Media had a couple of products on display as did Dimension Technologies, Ozware and ProWave.

This is the last year for the Video Toaster User Expo. The show is supposed to be folded into a more general Digital Video Expo, which is supposed to be held at about the same time next year in Los Angeles. While this will result in a larger number of vendors, the focus will not exclusively be on NewTek products. Only time will tell how successful this venture will be, and whether or not it will be of interest to those of you reading this. Knowing what some LightWave developers are working on, I am personally looking forward to all sorts of interesting developments in 1997. ■

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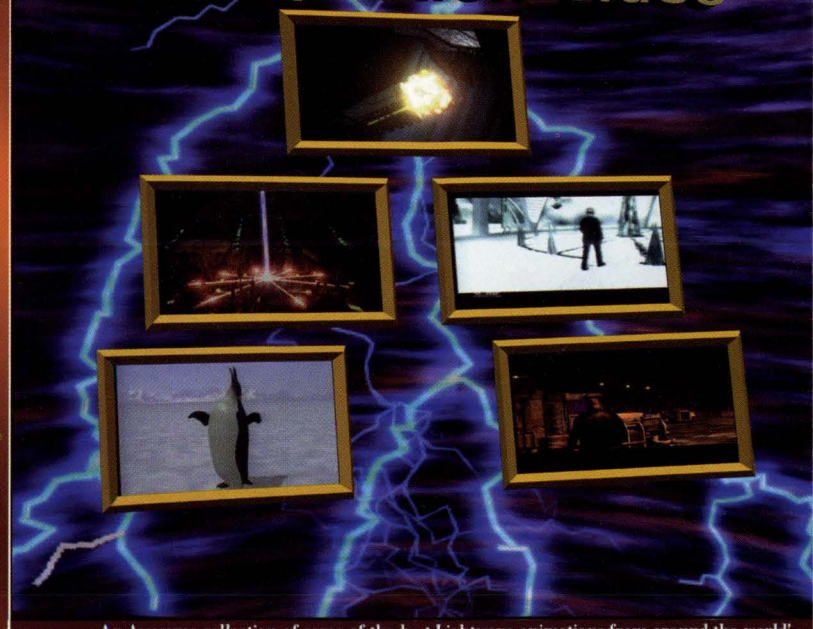

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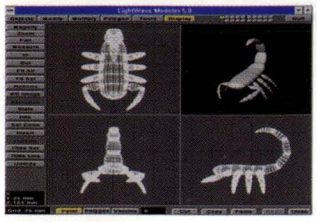

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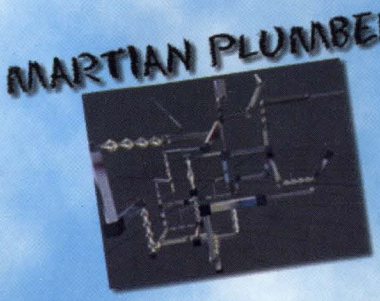

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